Formation control in the port-Hamiltonian framework

Ewoud Vos

university of groningen

The research described in this thesis has been carried out at the Faculty of Mathematics and Natural Sciences, University of Groningen, The Netherlands, within collaboration between the ENgineering and TEchnology institute Groningen (ENTEG) and the Johann Bernoulli Institute for Mathematics and Computer Science (JBI).

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Enabling new technology

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by

Ewoud Vos

born on 2 April 1986
in Peize

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To Elze,

and my family,
Berend, Grietje, and Judith

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About the author

Ewoud Vos was born in Peize, The Netherlands on 2 April 1986. In 2004 he received his VWO diploma with profiles *Nature and Technics* and *Nature and Health* at the Willem Lodewijk Gymnasium in Groningen. The same year he started the study of Applied Physics at the Faculty of Mathematics and Natural Sciences of the University of Groningen. One year later he switched to Industrial Engineering and Management at the same faculty, where he received the B.Sc. and M.Sc. degree (cum laude) respectively in 2008 and 2010. In his master thesis he designed a nonlinear controller for the VDO measurement machine of Irmato, which is used for sampling shaver heads of the nearby production line of Philips.

In 2010 Ewoud started as a PhD researcher in a joint project of the research groups Discrete Technology and Production Automation (DTPA) and Systems, Control and Applied Analysis (SCAA) under the supervision of Jacquelien Scherpen and Arjan van der Schaft. During four years he presented his work at many national and international conferences. In 2012 he won the Best Junior Presentation award at the Benelux Meeting on Systems and Control, for which he was nominated again in 2014. In 2013 he was on the short list for the Simon Stevin Leerling Prize at the STW Annual Congress. The results of his PhD research are presented in this thesis.

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Ewoud Vos
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